Project Progress Report
(03/01/2007 - 02/29/2008)

Project Title: Enhancing the Accuracy and Functionality of the Ensemble Streamflow Prediction (ESP) Program in the National Weather Service River Forecast System (NWSRFS) (GC06-123)
Award Number: NA06OAR4310062
Award Period: 06/01/2006 - 05/31/2009
Recipient Name: The Regents of the University of California, Irvine
Investigator(s): Soroosh Sorooshian

REPORT FIGURES

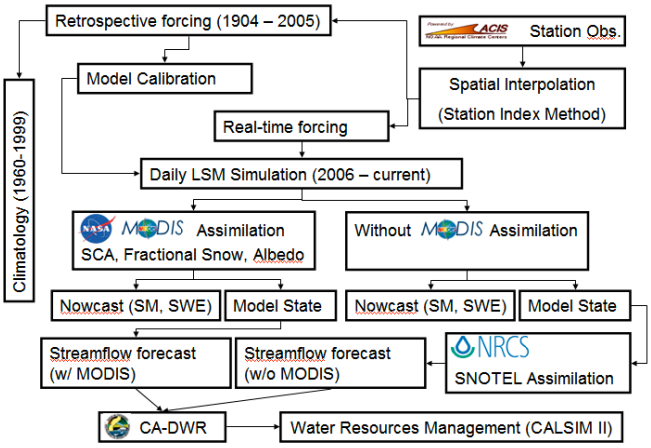

Fig. 1 Flowchart of the California Hydrologic Forecast System (CaliForecast)

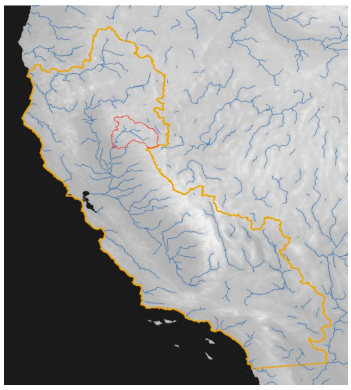

Fig. 2 CaliForecast coverage. Orange for 1/8th degree grids; Red for the Feather River Basin (1/16th degree grids)

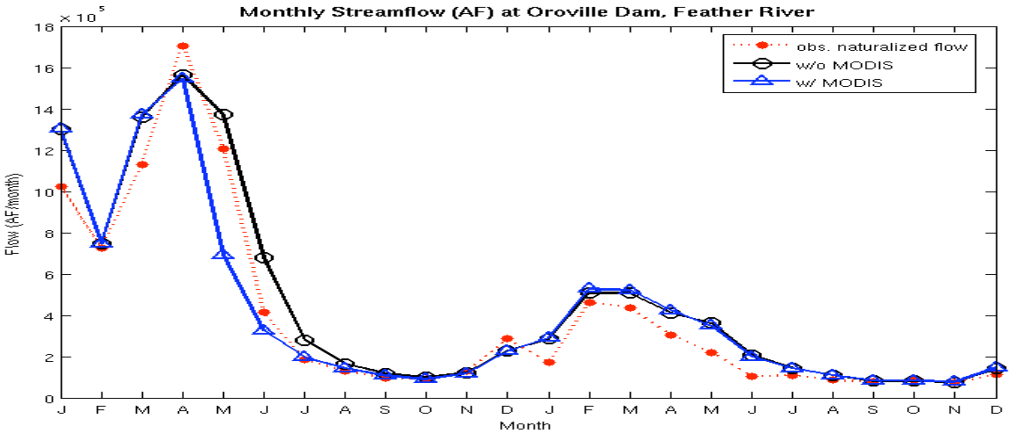

Fig. 3 Comparison of monthly streamflows at the Oroville Dam with and without MODIS snow assimilation (2006-2007).

Fig. 4 shows the predictions of soil moisture, snow water equivalent,

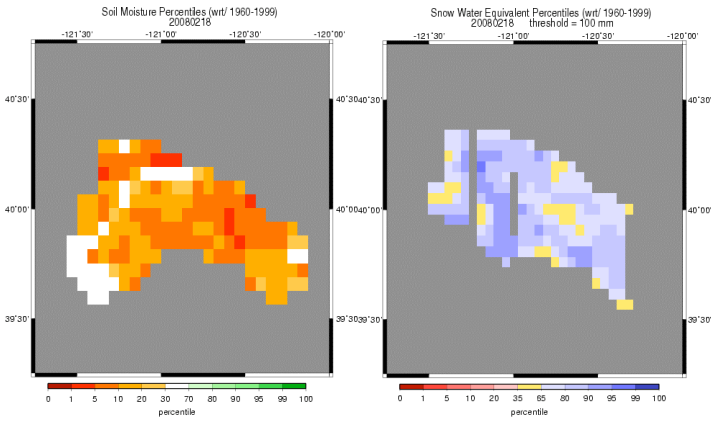

Fig. 4 1/16° model output over the Feather River (Left: Soil moisture, Right: Snow water equivalent) as percentiles of historical data.

Figs. 5-6 show the weight evolution and river flow time series in SBC and SMAP.

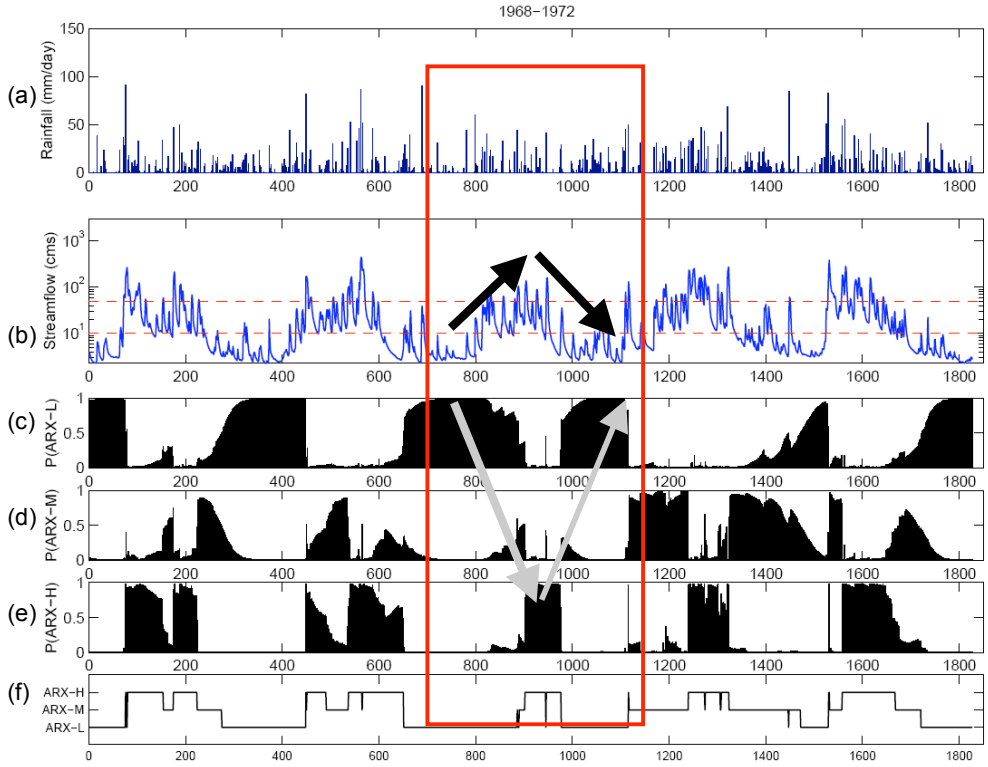

Fig. 5: Sequential Bayesian simulation (1964-1988): (a) rainfall, (b) streamflow, (c-e) *posterior* probabilities for the three component models and (f) the model identified as having the maximum *a posteriori* probability.

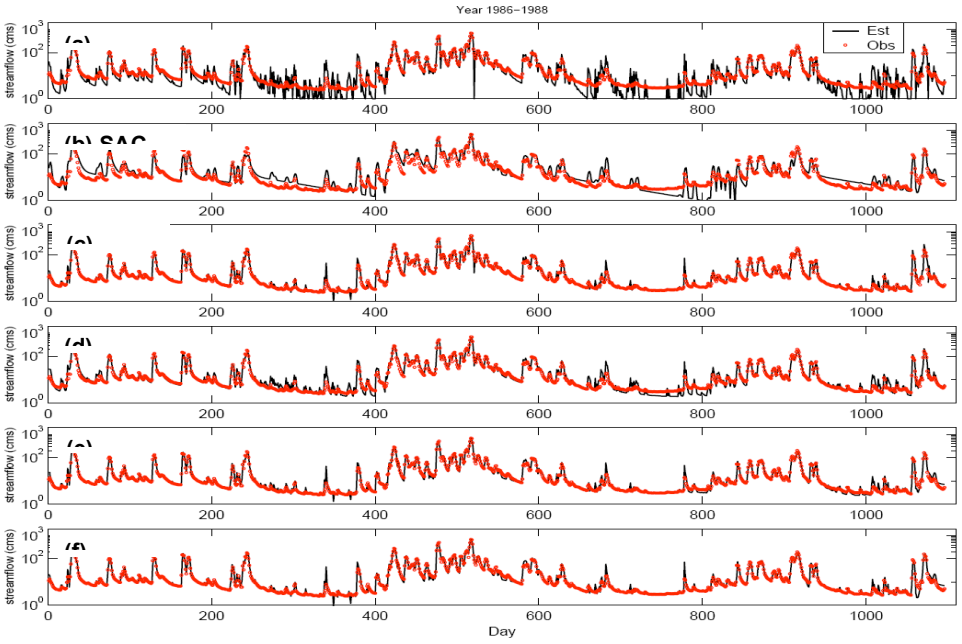

Fig. 6: Streamflow time series (1986-1988): (a) ARX, (b) SCA-SMA, (c) SOLO, (d) WA, (e) SBC, and (f) SMAP.

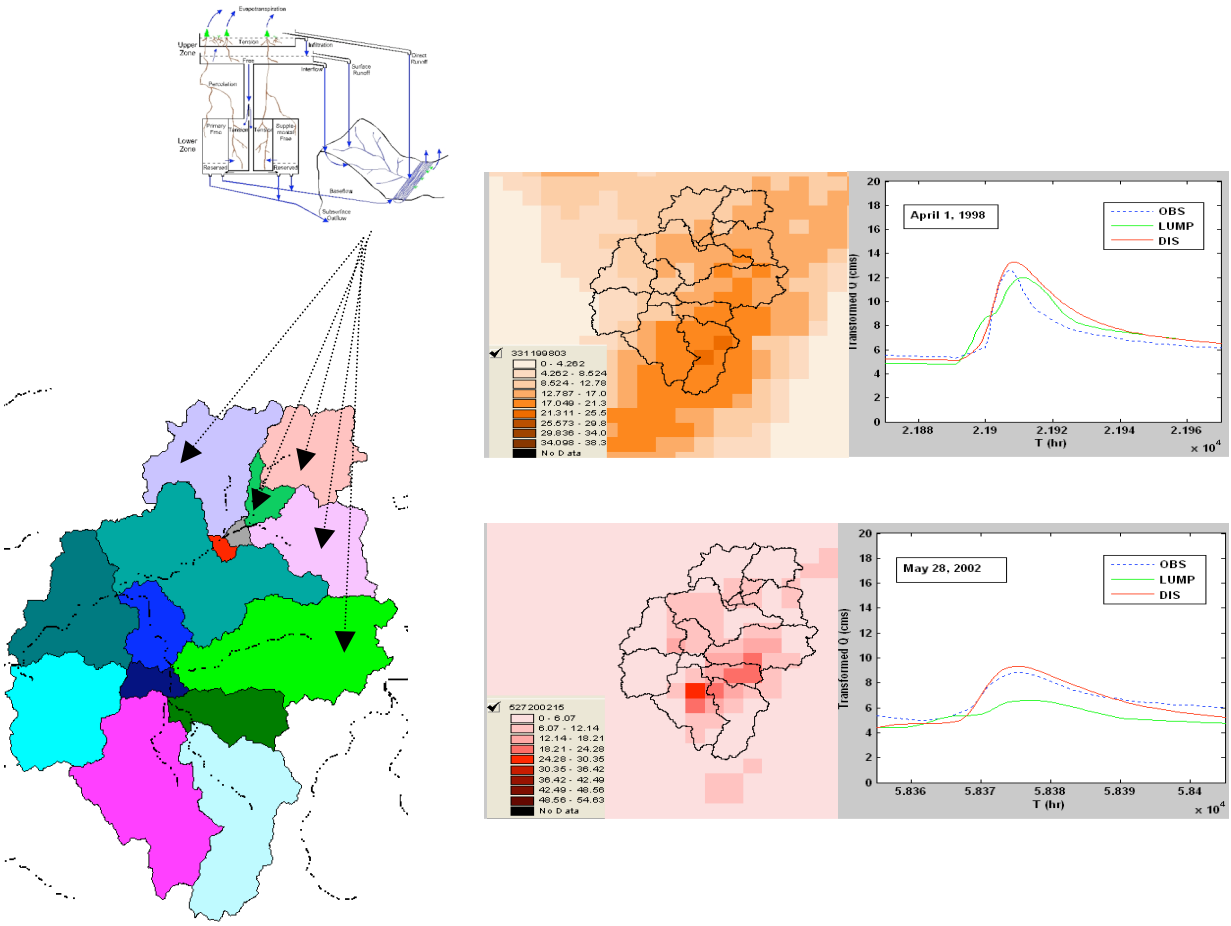

Fig. 6: SAC-SMA model and its applications for the DMIP study watershed as lumped and distributed models.